

In the claims:

1 1. In a mobile communication system for communicating packet data in at least a
2 first packet data flow pursuant to at least a first communication session with at least a first
3 mobile station by way of at least a first air link, the mobile communication system having a
4 network portion to which at least a first data service is coupled, and the network portion
5 including a network element and an interface element connected thereto by way of a
6 communication link, the packet data communicated between the network element and the first
7 mobile station upon a communication path of which the communication link and the first air link
8 form portions, an improvement of apparatus for selectively facilitating control of at least the first
9 packet data flow upon the communication path, said apparatus comprising:
10
11 a data packet flow selector coupled to the network portion for receiving an
12 indication of communication of the packet data in the first packet data flow upon the first air
13 link, said selector operable responsive thereto for selecting whether to alter the first packet data
14 flow upon the communication path.

1 2. The apparatus of claim 1 wherein said data packet flow detector selects whether
2 to alter the first packet data flow upon the communication link of the communication path.

1 3. The apparatus of claim 2 wherein the network portion includes a base station
2 gateway, wherein the network element is positioned at least proximate to the base station
3 gateway, relative to positioning of the interface element, wherein the first data service is coupled
4 to the base station gateway, and wherein said selector selects whether to terminate the first
5 packet data flow upon the communication link extending between the network element and the

6 interface element responsive to the indication of the communication of the packet data of the first
7 packet data flow to which said selector is coupled to receive.

1 4. The apparatus of claim 3 wherein the network portion further includes a cell
2 gateway, wherein the interface element is positioned at the cell gateway and the communication
3 link connects the base station gateway with the cell gateway, and wherein said selector selects
4 whether to permit continued communication of the packet data in the first packet data flow
5 between the base station gateway and the cell gateway.

1 5. The apparatus of claim 2 wherein the mobile communication system
2 communicates packet data in the first packet data flow pursuant to the first communication
3 session with the first mobile station and communicates packet data in at least a second packet
4 data flow pursuant to at least a second communication session with at least a second mobile
5 station by way of at least a second airlink and wherein said apparatus further comprises:

6 a flow allocator coupled to said data packet flow selector, said flow allocator for
7 selectively allocating communication capacity upon the communication link between the first
8 packet data flow and the at least the second packet data flow responsive to selection made by
9 said data packet flow selector.

1 6. The apparatus of claim 5 wherein said data packet flow selector further receives
2 an indication of communication of the packet data in the second packet data flow upon the
3 second air link, said selector further for selecting whether to alter the second packet data flow
4 upon the communication link.

1 7. The apparatus of claim 1 wherein the indication of the communication of the
2 packet data in the first packet data flow and of which said data packet flow selector is coupled to
3 receive comprises a value representative of an air link performance indicia.

1 8. The apparatus of claim 1 wherein packet data communicated in the first packet
2 data flow by way of the first air link is communicated upon the first air link pursuant to an ARQ
3 scheme in which the first mobile station returns an ACK (acknowledgment) when a data packet
4 is successfully received at the first mobile station and a NACK (negative acknowledgment) when
5 the data packet is unsuccessfully received at the first mobile station and wherein the indication,
6 of the communication of the packet data in the first packet data flow, to which said packet data
7 flow selector is coupled to receive, comprises a value inversely related to numbers of ACKs
8 returned by the first mobile station.

1 9. The apparatus of claim 8 wherein the interface element comprises a buffer at
2 which data packets are buffered at least for a selected time until an ACK is returned by the first
3 mobile station indicating successful reception thereof at the first mobile station, the data packets
4 buffered at the buffer forming a queue of a queue length corresponding to the data packets
5 buffered at the buffer and wherein the indication, of the communication of the packet data in the
6 first packet data flow, to which said packet data flow selector is coupled to receive further
7 comprises a queue length indicia representative of the queue length at the buffer.

1 10. The apparatus of claim 9 wherein said data packet flow selector selects to
2 terminate communication of the first packet data flow upon the communication path when the
3 queue length indicia is beyond a selected threshold.

1 11. The apparatus of claim 10 wherein the indication of the communication of the
2 packet data in the first packet data flow and of which said data packet flow selector is coupled to
3 receive comprises a value representative of a signal-to-noise ratio of data packets communicated
4 upon the first air link.

1 12. The apparatus of claim 11 wherein said data packet flow selector selects to
2 terminate communication of the first packet data flow upon the communication link when the
3 value representative of the signal-to-noise ratio is beneath a selected threshold.

1 13. The apparatus of claim 1 wherein said packet flow selector is embodied at the
2 interface element.

1 14. The apparatus of claim 1 wherein said data packet flow selector selects to
2 terminate the first packet data flow upon the communication path when the indication of the
3 communication of the packet data in the first packet data flow and of which said data packet flow
4 selector is coupled to receive when the indication is beyond a selected threshold.

1 15. The apparatus of claim 14 wherein the selected threshold is selected responsive to
2 a communication service-type to be effectuated by communication of the first packet data flow.

1 16. The apparatus of claim 14 wherein the selected threshold is selected responsive to
2 traffic-load indicia representative of traffic load conditions in the mobile communication system.

1 17. The apparatus of claim 14 wherein the selected threshold is selected responsive to
2 an airlink loss pattern of the first packet data flow upon the first airlink.

1 18. The apparatus of claim 14 wherein the selected threshold comprises a varying,
2 selectable threshold.

1 19. The apparatus of claim 14 wherein the mobile station is operable in the mobile
2 communication system pursuant to a service subscription and wherein the selected threshold
comprises, at least in part, a service subscription-related parameter.

1 20. The apparatus of claim 1 wherein the packet data flow detector selects whether to
2 alter the first packet data flow upon the first air link of the communication path.

1 21. In a method for communicating in a mobile communication system for
2 communicating packet data in at least a first packet data flow pursuant to at least a first
3 communication session with at least a first mobile station by way of at least a first air link, the
4 mobile communication system having a network portion to which at least a first data service is
5 coupled, and the network portion including a network element and an interface element
6 connected thereto by way of a communication link, the packet data communicated between the
7 network element and the first mobile station upon a communication path of which the
8 communication link and the first air link form portions, an improvement of a method for
9 selectively facilitating control of at least the first packet data flow upon the communication link,
10 said method comprising:

monitoring an indication of communication of the packet data in the first packet data flow upon the first air link; and

selecting, responsive to the indication monitored during said operation of monitoring, whether to alter the first packet data flow upon the communication path.

1 22. The method of claim 21 wherein the mobile communication system
2 communicates packet data in the first packet data flow pursuant to the first communication
3 session with the first mobile station and communicates packet data in at least a second packet
4 data flow pursuant to at least a second communication session with at least a second mobile
5 station by way of at least a second air link and wherein said method further comprises:
6 selectably allocating communication capacity upon the communication link
7 between the first packet data flow and the at least the second packet data flow responsive to
8 selection made during said operation of selecting.

1 23. The method of claim 17 wherein the indication monitored during said operation of
2 monitoring comprises a value representative of an air link performance indicia.

1 24. The method of claim 17 wherein said operation of selecting comprises comparing
2 the indication with a selected threshold.